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THE "MONSTER" STUDY

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An unpublished study is reported that was conducted during the late 1930s in which normally fluent children were reported to have been turned into stutterers. Theoretic and clinical implications are discussed.

The diagnosogenic (semantogenic) theory for the onset of stuttering was initially proposed by Wendell Johnson in the early 1940s. It suggested that calling attention to a child's normal hesitations (repetitions) could precipitate stuttering (Bloodstein, 1987). Some of the evidence that Johnson used to support this theory (e.g., certain tribes of American Indians, in which there appeared to be no stutterers, had no word for stuttering) is currently regarded as questionable (Bloodstein, 1987). The theory does not appear to be as widely accepted now as it was during the past 30 years, judging by the fact that many speech pathologists are recommending to parents that they make their children aware of their hesitations rather than ignoring them (Bloodstein, 1987).

If you wanted to directly test this theory, how would you do it? One way would be to take some normally fluent children, react adversely to their hesitations, and see if they turned into stutterers. This was done in an M.A. thesis that was directed by Wendell Johnson in the late 1930s (Tudor, 1939). The findings of this study and the events that occurred subsequent to its completion have never been published. It was labeled the "monster" study by some of the persons who were associated with the Stuttering Research Program at the University of Iowa during the 1940s and 1950s and who knew of its existence.

This study and the events that presumably occurred following it are described here. Its findings are of more than historical interest because it is, to the best of my knowledge, the most direct test of the diagnosogenic theory to date. Also, its findings have implications for clinicans whose approach to the treatment of stuttering in young children includes increasing the children's awareness of their hesitations.

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THE DIAGNOSOGENIC (SEMANTOGENIC) THEORY

Johnson wrote what he considered to be a brief, highly abstracted outline of this theory for Hahn's book, *Stuttering: Significant Theories and Therapies* (1956, pp. 59–64). He stated the following:

> In a semantic theory of stuttering, emphasis is placed upon the self-reflexive process of abstracting, the general mechanism of evaluation, by virtue of which any organism reacts to its own reactions. . . .
>
> . . . early infant vocalizing is characterized by a basic pattern of repetition. The infant does not say "da," but "da, da, da." This repetitive tendency persists into the period when the child begins to speak words and sentences and is not entirely absent from the speech of mature adults. . . . The beginning of the speech problem we call stuttering may be considered in relation to this particular characteristic of early normal speech.
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> Bluemel and Froeschels, particularly, have reported the observation that stuttering in its more severe forms is preceded in the great majority of cases by what Bluemel has called "primary stuttering," which have been described by these writers as essentially effortless, "unconscious," simple repetition of syllables, words, and phrases. Research dealing with the onset and early development of stuttering has yielded findings which support and extend the observations of Bluemel and Froeschels.
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> In fact, investigations of this problem have indicated that presumably what has been called "primary stuttering" is apparently the simple repetitiousness of preschool-age children. . . .
>
> The crucial point, however, is that the normal repetitions—and various other types of hesitant reactions that are well known to characterize childhood speech—*are not universally diagnosed as stuttering* or even as "primary stuttering" by parents, teachers, physicians, or other responsible adults. And it appears to make a significant difference whether or not they are so diagnosed in the case of any given child—a difference, that is, in the subsequent speech development of the child. It makes a difference because those who make such a diagnosis (whether or not they use the specific word "stuttering"—they may make it nonverbally, in fact, in the form of bodily tensions) reach self-reflexively to their own act of making the diagnosis. In simple terms, a mother is different from what she was before—in her evaluations of and reactions toward her child—after she has diagnosed him, i.e., classified him as a "stutterer," or as a "defective," as "having something wrong with his speech," etc. Regarding her act of diagnosis, or classification, as a reaction to or evaluation of the child, we may say that she then proceeds to react to that reaction, to evaluate that reaction; and this self-reflexive process can go on indefinitely as a series of reactions to reactions to reactions, etc., or as evaluations of evaluations of evaluations, etc.
>
> As this process continues, the mother responds less and less to the actualities of the child's behavior and more and more to her evaluations of it—on higher and higher levels of abstraction—until finally she may become quite disturbed and tense and seem almost incapable of directly observing

> and reporting the plain facts regarding her child's speech. The overt behavior which this involves on the part of the mother, as well as other members of the family, teachers, relatives, etc., constitutes a pronounced change in the child's semantic environment, the environment, that is, of evaluations, attitudes, policies, standards, verbalizations, etc. Corresponding changes in the child's own behavior, particularly his speech behavior, are to be expected, and they occur. These changes, as observed, are in the direction of increased speech hesitancy and repetitiousness. As the child adopts or interiorizes the evaluations of his speech and of himself with which he is stimulated, he too begins to evaluate these new evaluations of his and to react to the reactions which they involve. Thus the same self-reflexive process of abstracting gets under way in the child, so that he, too, comes to react less and less to the actualities of his speech and of his situation generally, and more and more to his evaluations of these actualities, and to his further, more abstracted, evaluations of these evaluations, etc., until he, too, may become quite tense and apprehensive and seem relatively disorientated as far as the realities involved are concerned. The corresponding overt behavior is seen as the tense, anxious hesitancy with its many complications which we call well-developed stuttering.
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> This, then, may be regarded as a brief, highly abstracted outline of a semantic theory of stuttering—a theory which implies stuttering is a *semantogenic* [italics mine] disorder with a specific *diagnosogenic* [italics mine] basis. That is to say, it implies that stuttering is a disorder in which self-reflexive evaluative or semantic reactions play a determining role, and that *the basic evaluative reaction is that which involves the act of diagnosis* [italics mine].

This theory assumes, therefore, that a person could be made to stutter by having somebody diagnose his normal disfluency behavior as abnormal and by indicating to him verbally or nonverbally, directly or indirectly, that he should try to speak with less hesitation.

CAN DIAGNOSING NORMAL DISFLUENCY AS STUTTERING REALLY CAUSE STUTTERING?

Johnson and his students reported a great deal of data that *indirectly* support the contention that the diagnosis of stuttering can cause stuttering (e.g., Johnson et al., 1959). To *directly* test the contention, one would identify children who are normal speakers—perhaps, even superior speakers—and tell them that they are hesitating (or stuttering) too much when they speak and that they should try to speak without hesitating (or stuttering). If the children, after being told this, became more hesitant when they spoke, or if they began to stutter, the theory would be supported.

Data appropriate for performing a *direct test* of this theory were reported in an M.A. thesis (Tudor, 1939) that was done under the direction

of Professor Wendell Johnson at the University of Iowa. The study was done before he formulated the diagnosogenic (semantogenic) theory—when the theory being promulgated by the Stuttering Research Program at Iowa was that stuttering was due to lack of unilateral cerebral dominance. Having been a student and a research assistant of Wendell Johnson, I find it unthinkable that he would have conducted such a study after formulating the theory The study was never published, nor were its results widely disseminated—it is not even mentioned in Bloodstein's *A Handbook on Stuttering* (1987) or in Van Riper's *The Nature of Stuttering* (1982).

I believe that the most likely reason why the results of this study were not widely disseminated was that Johnson was embarrassed about them and that his colleagues, who knew of their results, did not want to embarrass him further by disseminating them. Since the theory was widely accepted based on the indirect evidence, they probably felt it was not necessary to do so.

I feel that it is very important that the results of the Tudor study be widely disseminated at this time. This is because some authorities are recommending that if a child seems excessively disfluent or seems to be beginning to stutter, he should be encouraged to try to speak more fluently. Such recommendations would be expected to *increase* the probability that a child will become or remain a stutterer if the diagnosogenic theory is valid.

The Tudor study was a part of a program of research in which Johnson was attempting to assess the validity of certain general semantics formulations (Johnson, 1946). One of these formulations was *evaluative labeling*—the tendency ". . . to evaluate individuals and situations according to the names we apply to them" (Johnson, 1946, p. 261). There were at least four other M.A. theses completed under Johnson's direction in 1939 that were a part of this research program (Johnson, 1946, pp. 517–518). None of the four theses dealt with stuttering.

One of the primary objectives of Tudor's study was to determine whether labeling a person previously regarded as a normal speaker as a "stutterer" would have any effect on his or her speech fluency. Tudor screened the children in an orphanage and selected six (who were regarded as normal speakers) to serve as subjects. Their chronological ages were 5, 9, 11, 12, 12, and 15. She made the following statement to each child at the beginning of the experiment:

> The staff has come to the conclusion that you have a great deal of trouble with your speech. The types of interruptions which you have are very undesirable. These interruptions indicate stuttering. You have many of the symptoms of a child who is beginning to stutter. You must try to stop yourself immediately. Use your will power. Make up your mind that you

> are going to speak without a single interruption. It's absolutely necessary that you do this. Do anything to keep from stuttering. Try harder to speak fluently and evenly. If you have any interruptions, stop and begin again. Take a deep breath whenever you feel you are going to stutter. Don't ever speak unless you can do it right. You can see how [the name of a child in the institution who stuttered rather severely] stutters, don't you! Well, he undoubtedly started the same way you are starting. Watch your speech every minute and try to do something to improve it. Whatever you do, speak fluently and avoid any interruptions whatsoever in your speech. (Tudor, 1939, pp. 10–11)

In addition, she made the following statements to the teachers and matrons who interacted with these children:

> The staff has come to the conclusion that these children show definite symptoms of stuttering. The types of interruptions they are having very frequently turn into stuttering. We have handled a number of cases very similar to these children. You should impress upon them the value of good speech, and that in order to have good speech one has to speak fluently. Watch their speech all the time very carefully and stop them when they have interruptions; stop them and have them say it over. Don't allow them to speak unless they can say it right. They should be made very conscious of their speech, and also they should be given opportunities to talk so that their mistakes can be pointed out to them. It is very important to watch for any changes in the child's personality, in his attitude toward his school work, in his attitude toward his playmates, etc. (Tudor, 1939, pp. 12–13)

Tudor spoke to the children and their teachers and matrons at least once a month for a semester in order to attempt to reinforce the label "stutterer." She reported the following description of the children's speech at the end of the semester:

> All of the subjects . . . showed similar types of speech behavior during the experimental period. A decrease in verbal output of all six subjects; that is they were reluctant to speak and spoke only when they were urged to. Second, their rate of speaking was decreased. They spoke more slowly and with greater exactness. They had a tendency to weigh each word before they said it. Third, the length of response was shorter. The two younger subjects responded with one word whenever possible. Fourth, they were more self-conscious. They appeared shy and embarrassed in many situations. Fifth, they accepted the fact that there was something definitely wrong with their speech. Sixth, every subject reacted to his speech interruptions in some manner. Some hung their heads; others gasped and covered their mouths with their hands; others laughed with embarrassment. In every case the children's behavior changed noticeably. (Tudor, 1939, pp. 147–148)

She concluded that her findings supported the hypothesis that evaluative labeling can influence behavior.

Judging by information I received from several persons with whom Johnson discussed the study, sometime following its completion Johnson was notified by the orphanage that the changes in the children's communicative behavior had not only persisted, but there was concern that at least some of them had become stutterers. Tudor, of course, was concerned about the children and visited them periodically for at least several years after the study. Letters she wrote to Johnson about her visits with the children suggest that at least some of them continued to stutter.

While I cannot prove "beyond a shadow of a doubt" that at least some of the children became stutterers, I believe that it is quite likely that they did for the following reasons:

1) The persons who told me about the study had been doctoral students of Johnson. They all seemed to respect him a great deal and appeared to accept his diagnosogenic theory. They were all concerned that publicizing the study could hurt Johnson's professional reputation—i.e., cause him to be viewed as being similar to a "German concentration camp scientist." What would they have to gain by telling me that Johnson told them at least some of the children had begun to stutter if he had not?

2) Johnson formulated his diagnosogenic (semantogenic) theory after the study had been completed. If at least some of the children had not begun to stutter, why would Johnson have been motivated to promulgate a theory that stated that stuttering could result from a set of circumstances similar to the methodology used in the Tudor study?

3) Tudor visited the children periodically following the completion of her study and wrote letters to Johnson about them. She is unlikely to have done so unless she was concerned about their speech.

4) Johnson did not publish the findings of the study, although they clearly demonstrated that evaluative labeling could influence behavior. In fact, I believe it is the only thesis that was completed during this period in his general semantics research program that he did not mention in *People in Quandaries* (1946). Also, he did not cite the findings in his writings to support the diagnosogenic theory, even though they clearly supported it. If the changes in the children's communicative behavior had only been temporary, it seems quite likely that he would have used the findings for these purposes. Or, if he had been concerned about their reliability, he would have had the study replicated.

The findings of the Tudor study provide strong evidence that diagnosing normal disfluency as stuttering can cause stuttering. What is particularly impressive about these findings is the fact that five of the six children were considerably beyond the age at which stuttering ordinarily begins. They had experienced being a normal speaker for as long as 15 years. The implications of the findings seem clear—asking a child to monitor

his speech fluency and attempt to be more fluent can lead to increased disfluency and possibly stuttering.

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